

```

1 grammar org.xtext.example.mydsl.MyDsl with
  org.eclipse.xtext.common.Terminals
2
3 generate saturn "http://www.xtext.org/example/iotlan/Iotlan"
4
5
6 Domainmodel:
7   (elements+=Type)*;
8
9 Type:
10   Device | Place | Var | Assignment | EventStatement | OtherStatements |
  Entity ;
11
12
13
14 Device: /* IoT Devices and Place declaration */
15   'device' name=ID (ASSIGN (address=IPV6 | address=STRING))?;
16
17 Place: 'place' name=ID;
18
19 Var: /* common variables declaration */
20   name=ID;
21
22 Assignment: /* IoT Devices and Place assignment*/
23   typeDev=[Device] ASSIGN (address=IPV6 | address=STRING)
24   | typeVar=[Var] ASSIGN valueI= INT
25   | typeVar=[Var] ASSIGN valueF= FLOAT;
26
27
28
29
30 EventStatement: 'event' name=ID LPAREN (ID (',' ID)?? RPAREN
  '{' (eventStatement+=Order)+'}';
31
32 Order:
33   type=[Device] '.' 'on'
34   | type=[Device] '.' 'off'
35   | 'wait' typeN=INT ('sec' | 'min');
36
37 OtherStatements: 'Add' even=[EventStatement] 'to' type=[Place]
38   | 'if' type=[Device] '.info' (COMPARATION |
  LARGER THAN | SMALLER THAN | EQUALSMALLER | EQUALLARGER)
39   'than' typeI=INT ('%')? '{' type2=[Place] '.'
  event=[EventStatement] '}'
40   | type2=[Place] '.' event=[EventStatement];
41
42
43 DataType:
44   'datatype' name=ID;
45
46 Entity:
47   'entity' name=ID ('extends' superType=[Entity])? '{'
48   (features+=Feature)*

```

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49     '}' ;
50
51 Feature:
52     (many?='many')? name=ID ':' type=[Type];
53
54
55
56
57     // ===== LEXIC
    =====
58
59
60 // Lexer definition: Here we put the words we are going to use in Saturn
    DSL
61
62
63 terminal FLOAT: INT+'.'INT+;
64 terminal PLUS: '+';
65 terminal MINUS: '-';
66 terminal MULTI: '*';
67 terminal DIV: '/';
68 terminal ASSIGN: '=';
69 terminal LPAREN: '(';
70 terminal RPAREN: ')';
71 terminal COMPARATION: '==';
72 terminal LARGERTHAN: '>';
73 terminal SMALLERTHAN: '<';
74 terminal EQUALLARGER: '<=';
75 terminal EQUALSMALLER: '>=';
76 terminal NEWLINE: '\r\n' | '\r' | '\n' ;
77 terminal IPV6: ('a'..'f'|'A'..'F'|'0'..'9')('a'..'f'|'A'..'F'|'0'..'9')
    ('a'..'f'|'A'..'F'|'0'..'9')('a'..'f'|'A'..'F'|'0'..'9')':':
    ('a'..'f'|'A'..'F'|'0'..'9')('a'..'f'|'A'..'F'|'0'..'9')':':
81
82

```